



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/205,045	03/02/94	DI PIETRO	50301

21M1/1206
WESTINGHOUSE ELECTRIC CORP.
LAW DEPT-INTELLECTUAL
PROPERTY SECTION
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PITTSBURGH PA 15222-1384

EXAMINER
LABALLE, C

ART UNIT	PAPER NUMBER
2102	//

DATE MAILED: 12/06/96

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/205,045

Applicant(s)

Di Pietro et al.

Examiner

Clayton E. LaBalle

Group Art Unit

2102



☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1, 10, 11, 13, 14, and 22-43 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 10, 11, 13, 14, and 22-43 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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The indicated allowability of claims 1, 10-11, 13-14 and 22-43 is withdrawn in view of the newly discovered reference(s) to Fahlman. Rejections based on the newly cited reference(s) follow.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 10 and 13-14 are rejected under 35 U.S.C. § 103 as being unpatentable over Tanaka in view of Fujii and Fahlman.

Tanaka discloses the electric vehicle drive system essentially as claimed except for utilizing spray nozzles at the ends of the machine and coating the slots of the rotor or the stator. For example, Tanaka discloses a drive motor for a vehicle which includes an oil-cooled motor which can be an induction or synchronous motor. As is well known in the art, induction motors may have rotors formed as a stack of laminae with a conductive metal such as aluminum or copper cast into openings in the stack to form a cage winding.

Fujii teaches that it is well known to provide spray nozzles at each end of the dynamoelectric machine in order to spray cooling fluid directly onto the end turns of the stator

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winding to produce an enhanced cooling arrangement resulting in improved machine performance (see lines 60-75, col. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized, in the drive motor of Tanaka, spray nozzles at the ends of the machine to directly spray cooling fluid onto the windings to enhance the cooling of the machine and to improve the performance of the machine, as disclosed by Fujii.

In regards to coating the slots of the rotor or the stator with a material such as a ceramic, to protect the rotor or stator during the casting of the conductor, Fahlman teaches that it is well known to coat the outer surface of an induction rotor core with a ceramic material in order to prevent the cast conductor from cooling too rapidly so as to produce a casting which is free from voids, cold shuts and other imperfections (see lines 15-38, col. 2, page 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have coated the slots of the rotor or the stator of the motor of Tanaka with a ceramic material in order to protect the rotor or stator from the molten metal during the casting process as well as to produce conductors which are relatively free from defects which arise during casting, as disclosed by Fahlman.

Claims 11 and 22-25 are rejected under 35 U.S.C. § 103 as being unpatentable over Tanaka in view of Fujii and Fahlman.

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Tanaka, Fujii and Fahlman disclose the motor essentially as claimed except for utilizing the specific material for the coating.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the specific composition of ceramic materials in the motor of Tanaka, Fujii and Fahlman, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Claims 26-28, 36-38 are rejected under 35 U. S.C. § 103 as being unpatentable over Tanaka in view of Fahlman.

Tanaka discloses the electric vehicle drive system essentially as claimed except for coating the slots of the rotor or the stator. For example, Tanaka discloses a drive motor for a vehicle which includes an oil-cooled motor which can be an induction or synchronous motor. As is well known in the art, induction motors may have rotors formed as a stack of laminae with a conductive metal such as aluminum or copper cast into openings in the stack to form a cage winding.

In regards to coating the slots of the rotor or the stator with a material such as a ceramic, to protect the rotor or stator during the casting of the conductor, Fahlman teaches that it is well known to coat the outer surface of an induction rotor core with a ceramic material in order to prevent the cast conductor from cooling too rapidly so as to produce a casting which is free from

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voids, cold shuts and other imperfections (see lines 15-38, col. 2, page 1). Fahlman also teaches that the conductors may be made from other materials such as aluminum, aluminum alloys, copper, magnesium or other alloys.

It would have been obvious to one of ordinary skill in the art at the time of the invention to have coated the slots of the rotor or the stator of the motor of Tanaka with a ceramic material in order to protect the rotor or stator from the molten metal during the casting process as well as to produce conductors which are relatively free from defects which arise during casting, as disclosed by Fahlman.

Claims 29-35 and 39-43 are rejected under 35 U.S.C. § 103 as being unpatentable over Tanaka in view of Fahlman.

Tanaka and Fahlman disclose the motor essentially as claimed except for utilizing the specific material for the coating or the specific material properties.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to the specific composition of ceramic materials or the specific material characteristics in the motor of Tanaka and Fahlman, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clayton E. LaBalle whose telephone number is (703) 308-0519. The examiner can normally be reached on Monday-Thursday from 6:30 AM-4:00 PM and every other Friday from 6:30 AM-3:00 PM. The above number is equipped with voice mail. The examiner can also be reached via E-mail at claballe@pioneer.uspto.gov.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Stephan, can be reached on (703) 308-2826. The fax phone number for this Group is (703) 305-3431(32).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-1782.



Clayton E. LaBalle
Primary Examiner
Art Unit 2102
November 12, 1996